

## Abstract

The present invention discloses a beam forming method for a smart antenna and a beam forming apparatus for a smart antenna. Said method comprises: implementing pre-multibeam processing and time delay aligning to array signals; calculating a suboptimum weight by means of a pilot frequency symbol; iteratively calculating an optimum weight with said suboptimum weight as an initial value; forming beams by means of said optimum weight. To use the beam forming method and apparatus of the present invention, it can reduce the bit error ratio for receiving and outputting greatly and avoid the multiplication between large matrixes and matrix inversion and then replace them by simple addition and multiplication, so as to reduce the difficulty for hardware implement and make it easier to be performed.